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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,879	09/30/2003	Changwen Liu	884.933US1	6806
21186 7590 06/06/2007 SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER MUI, GARY	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 06/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,879

Applicant(s)

LIU, CHANGWEN

Examiner

Gary Mui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 17 is objected to under 37 CFR 1.75 because of the following informalities:

For claim 17 line 2, it is suggested to the applicant to delete the word --a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 27 – 36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 27 – 36, the claims are directed to a computer program per se, which is non-statutory subject matter. The claim recites a machine readable medium have machine executable instructions; a machine readable medium which is not a "computer readable medium" and which is not stored with, embodied with, or encoded with, "computer executable instructions" will not be able to cannot carry out the functionality of the claimed invention

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Guo et al. (US 6,937,591 B2).

For claim 1, Guo et al. teaches transmitting a packet on a wireless network; if transmitting the packet is not successful, then performing the tasks of: setting a contention window parameter according to a fast backoff operation, and if transmitting a preceding packet is not successful then increasing a threshold value (see column 1 lines 33 – 47); if transmitting the packet is successful and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation; and if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation (see column 7 lines 12 – 53, an adaptive contention window based on collisions of packets where the window can increase or decrease).

For claim 11, Guo et al. teaches a processor; a memory coupled to the processor; a wireless network interface coupled to the processor (see figure 1, the computing device for implementing the method with a memory system, box 104, a processor, box 102, and a communication link, box 112); wherein the processor is operable to cause the network interface to: transmit a packet on a wireless network, if the packet is not successfully transmitted, then performing the tasks of: setting a contention window parameter according to a fast backoff operation, and if transmitting a preceding packet is not successful then

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increasing a threshold value, if the packet is successful transmitted and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation, and if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation (see column 7 lines 12 – 53, an adaptive contention window based on collisions of packets where the window can increase or decrease).

For claim 27, Guo et al. teaches a computer program (see column 3 lines 23 – 42) for implementing the method of transmitting a packet on a wireless network; if transmitting the packet is not successful, then performing the tasks of: setting a contention window parameter according to a fast backoff operation, and if transmitting a preceding packet is not successful then increasing a threshold value (see column 1 lines 33 – 47); if transmitting the packet is successful and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation; and if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation (see column 7 lines 12 – 53, an adaptive contention window based on collisions of packets where the window can increase or decrease).

For claim 37, Guo et al. teaches a media access and control module (see column 7 lines 6 – 11); a distributed coordination function module coupled to the media access and control

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module operable to: transmit a packet on a wireless network, if the packet is not successfully transmitted, then performing the tasks of: setting a contention window parameter according to a fast backoff operation, and if transmitting a preceding packet is not successful then increasing a threshold value, if the packet is successful transmitted and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation, and if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation (see column 7 lines 12 – 53, an adaptive contention window based on collisions of packets where the window can increase or decrease).

For claims 2, 12, 28 and 38, Guo et al. teaches the fast backoff operation comprises increasing the contention window in an exponential manner (see column 1 lines 33 – 53).

For claims 3, 13, and 29, Guo et al. teaches the fast backoff operation comprises substantially doubling the contention window parameter (see column 1 lines 33 – 53).

For claims 4, 14, and 30, Guo et al. teaches the fast backoff operation comprises setting the contention window to a predetermined maximum value (see column 1 lines 33 – 53).

For claims 5, 15, 31, and 39, Guo et al. teaches the contention avoidance operation decreases the contention window parameter in a substantially linear manner (see column 9 lines 29 – 37 and column 9 line 66 – column 10 line 10).

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For claims 6, 16, and 32, Guo et al. teaches the contention avoidance operation subtracts a predetermined stepsize value from the contention window parameter (see column 9 lines 29 – 37).

For claims 7, 17, and 33, Guo et al. teaches the stepsize value is determined according to the contention window parameter (see column 9 line 66 – column 10 line 10).

For claims 8, 18, 34 and 40, Guo et al. teaches the slow start operation decreases the contention window parameter in a substantially exponential manner see column 10 line 56 – column 11 line 5).

For claims 9, 19, and 35, Guo et al. teaches the slow start operation substantially halves the contention window parameter (see column 9 line 66 – column 10 line 10).

For claims 10, 20, and 36, Guo et al. teaches setting the contention window parameter to a predetermined maximum value prior to transmitting any packets (see column 1 lines 33 – 53).

For claims 21 – 25, Guo et al. teaches the processor, memory, and wireless network interface are incorporated in a network interface card, a wireless base station, personal digital assistant a personal computer, and a server computer (see column 2 lines 21 – 36 and column 3 lines 53 – 63).

For claim 26, Guo et al. teaches the wireless interface is an interface to network conforming to an IEEE 802.11 protocol (see column 7 lines 6 – 11).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watanabe et al. (US 6,285,662 B1), Benveniste (US 7,027,462 B2), Negus (US


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7,085,284 B1), Negus (US 2001/0055312 A1), Cervello et al. (US 2002/0071448 A1), Lee (US 2004/0004973 A1), Yonge, III et al. (US 2004/0136396 A1), and Ginzburg et al. (US 2004/0264423 A1) are cited to show systems and methods for contention control in wireless networks.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Mui whose telephone number is (571) 270-1420. The examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


GM
06.01.2007


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SUPERVISORY PATENT EXAMINER